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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,135	06/05/2001	David Seneor	3848-010270	3534

7590

07/31/2002

Richard L Byrne
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219-1818

EXAMINER

BRUENJES, CHRISTOPHER P

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 07/31/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/763,135

Applicant(s)

SENEOR, DAVID

Examiner

Christopher P Bruenjes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: p.4 line 38 through p. 5 line 2 is confusing. The following is a suggested change that clarifies the statement: replace "to the pure polyurethane base" (p. 5 line 1) with "of pure polyurethane." Also p. 2 line 14 should read "too expensive" not "too much expensive."

Appropriate correction is required.

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "material having known strength characteristics" and never explaining what those characteristics are. Impervious paper and pure polyurethane are vague descriptions that need definition.

Claim Rejections - 35 USC § 112

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 2, and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 4, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Further, the phrase "a carbon steel typically used in the industry" is vague and indefinite. The phrases "material having known strength characteristics" and "impervious paper" are also indefinite; the said characteristics are never explained.

Regarding claims 2, the latex-based paper is further limited by "having a suitable strength," but neither the claim nor the specifications define what is a "suitable strength."

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 3-4, and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp (USPN 5,553,734) in view of Oxley (USPN 5,328,733).

Sharp teaches an underground reservoir used for storing liquid comprising an inner, main reservoir made of conventional steel (col. 8 lines 59-61) and an outer, secondary wall or

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continuous wall (col. 3, lines 50-52) comprising a coating layer made of a fibrous reinforced resinous material (col. 2, lines 2-5). The coating layer comprises an inner layer made from a fibrous reinforcing material (col. 6 lines 55-56) and an outer layer made of polyurethane (col. 6-7 lines 63-4).

Regarding claims 3 and 7, Sharp teaches the outer layer of the coating layer is made of polyurethane without the use of solvents by direct application (col.6-7 lines 63-4).

Regarding claim 4, Sharp teaches the process for manufacturing an underground reservoir comprising the steps of providing an inner, main reservoir made from conventional steel (col. 8 lines 59-61) and covering the outer surface with a first coating layer made from a fibrous reinforcing material (col. 6 lines 55-60) and applying a second polyurethane-based coating later over said first coating layer (col.6-7 lines 63-4).

Regarding claim 8, Sharp teaches that the thickness of the resinous material is controlled or "kept to a desired minimum thickness" so that the coating does not fully penetrate through the fibrous material or array (col. 6 lines 14-20). Sharp does not explicitly claim paper as a fibrous reinforcing material.

However, Oxley teaches that fibrous reinforcing material is notoriously well known in the art as paper (col. 1 line 20). Therefore, one of ordinary skill in the art would have

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recognized the paper as the fibrous reinforcing material to use in the casing article for the purpose of reinforcing in the casing wall (col. 1 line 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use paper as the fibrous reinforcing material in Sharp as taught by Oxley in order to reinforce the second reservoir wall of Sharp. Note that the examiner takes a position that the pure polyurethane is a compound composed of 100% polyurethane.

5. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp in view of Oxley as applied to claims 1, 3-4, and 7-8 above, and further in view of Gurin et al (USPN 3,616,178). Sharp with Oxley teach the basic claimed underground reservoir as described above. Sharp with Oxley fail to teach that the impervious paper is latex-based paper. Gurin teaches that the latex-impregnated paper is a tough smooth dimensionally stable high tensile strength, tear-resistant paper used for packaging with added plastic coatings (col. 11 lines 39-41). Therefore, one of ordinary skill in the art would have recognized that the latex-impregnated paper is used in packaging containers for the purpose of enhancing the tensile strength and tear resistance of the coating as taught by Gurin.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Sharp with a latex-impregnated paper as taught by Gurin in order to enhance the tensile strength and tear-resistance of the coating.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp in view of Oxley as applied to claims 1, 3-4, and 7-8 above, and further in view of Mitchell (USPN 5,090,586).

Sharp with Oxley teach the basic claimed underground reservoir as described above and that before adding a resin or coating layer a surface preparation is given to enhance bonding. Sharp does not provide an example of a surface preparation that would enhance bonding (col. 5 lines 43-46). Mitchell, however, teaches that it is a common technique to abrasive or "jet" blast steel for the purpose of enhancing bonding in the dual wall tank art (col. 4 lines 14-15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a step in making Sharp to abrasive or "jet" blast the steel main reservoir before applying the coating, as taught by Mitchell, in order to enhance bonding.


Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Olvey (USPN 6,280,825), Finestone et al (USPN 6,083,580), Yamada et al (USPN 6,010,759), Sharp (USPN 5,816,426; 5,494,183; 4,871,078) are cited of interest to show the state of the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Bruenjes whose telephone number is 703-305-3440. The examiner can normally be reached on Monday thru Friday from 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772 7/26/02

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Christopher P Bruenjes

Examiner

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CPB

July 26, 2002